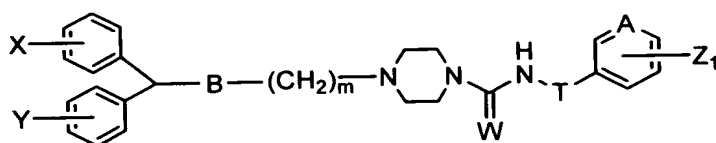
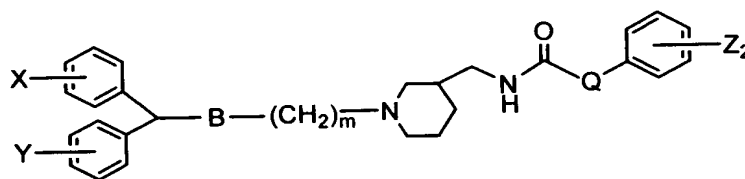


ABSTRACT

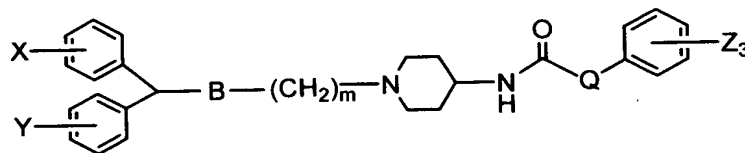
Piperidine or piperazine compounds useful for treating neurodegenerated diseases characterized by the lack of dopamine neurons activity or for imaging the dopamine neurons are provided. The compounds are characterized by the formulae:



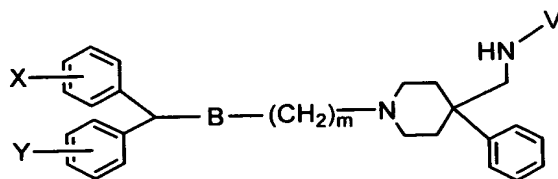
Formula I



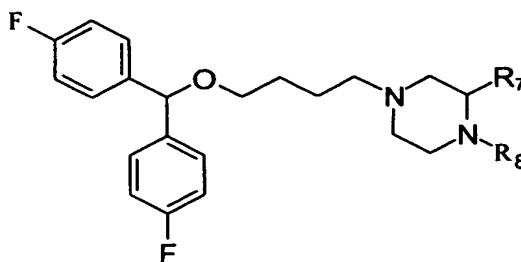
Formula II



Formula III



Formula IV



Formula V

wherein:

n is an integer of 1 to 6; X , Y , Z_1 and Z_2 can be the same or different and are hydrogen, halo, haloalkyl, alkyl, aryl, (C_1-C_6) alkoxy, N -alkyl, (C_2-C_6) acyloxy, N -alkylene, $-SH$, $-SR$, wherein R is from the same group as R_1 and R_2 and can be the same or different than R_1 and R_2 , amino, nitro, cyano, hydroxy, $C(=O)OR_6$, $-C(=O)NR_5R_4$, NR_3R_2 , or $S(=O)_kR_1$ wherein k is 1 or 2, and R_1 to R_6 are independently hydrogen or (C_1-C_6) alkyl;

R_1 , and R_2 can be the same or different and are hydrogen, (C_1-C_6) alkyl, hydroxyalkyl or mercaptoalkyl, $-C(=O)OR_1$, cyano, (C_1-C_6) alkenyl, (C_2-C_6) alkynyl, or 1, 2, 4-oxadiazol-5-yl optionally substituted at the 3-position by Z_4 wherein any (C_1-C_6) alkyl, (C_1-C_6) alkanoyl, (C_2-C_6) alkenyl or (C_2-C_6) alkynyl can optionally be substituted by 1, 2 or 3 Z ;

R_7 can be hydrogen, O or phenyl

R_8 can be hydrogen, phenyl, halophenyl, nitrophenyl, pyridyl, piperonyl or sulfoxonitrophenyl

Z_4 is (C_1-C_6) alkyl or phenyl, optionally substituted by 1, 2 or 3 Z_1

W is O or S

T is amino or C_1-C_6 aminoalkyl

A is N or C

T is C_1-C_6 alkyl or sulfonyl and

V is alkyl (C_0-C_6) , alkenyl, alkynyl, haloaryl, alkyl phenol, alkyl halophenyl, and R_1 or R_2 as indicated above and

ϕ is phenyl, naphthyl, thienyl or pyridinyl.